

**Notice of Allowability**

Application No.

10/550,986

Examiner

Ling-Siu Choi

Applicant(s)

MORINI ET AL.

Art Unit

1713

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 09/26/2005.
2. ☒ The allowed claim(s) is/are 1-9 and 11-23.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date 02/03/2006
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

### **DETAILED ACTION**

1. This application is a 371 of PCT/EP04/02519 filed 03/09/2004 which claims the benefit of 60/460,643 filed 04/04/2003.
2. This Office Action is in response to the Preliminary Amendment filed 09/26/2005. Claim 9 was canceled and claim 23 has been added. Claims 1-8 and 10-23 are now pending.

### ***Examiner's Amendment***

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CAR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

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Authorization for this examiner's amendment was given in a telephone interview with Mr. William Reid on July 16, 2007.

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4. The application has been amended as follows:

Claim 1, line 2, change "wherein," to --wherein--.

***Allowable Subject Matter***

5. Claims 1-9 and 11-23 are allowed.

6. The following is an examiner's statement of reasons for allowance:

The present claims are allowable over the closest references: Invernizzi et al. (US 4,506,027) and Sacchetti et al. (EP 0 395 083 A2).

Summary of claim 1:

An adduct comprising $\text{MgCl}_2 \cdot (\text{EtOH})_m(\text{ROH})_n(\text{H}_2\text{O})_p$	
R	a $\text{C}_{1-15}$ hydrocarbon group excluding ethyl, optionally substituted with at least one group comprising a heteroatom;
n, m	indexes $> 0$ satisfying the equations $(n+m) \geq 0.7$ and $0.05 \leq n/(n+m) \leq 0.95$ ;
p	a number ranging from 0 to 0.7
with the proviso that when <u>R is methyl</u> and <u>(n+m) is in the range of 0.7 to 1</u> , the value of <b><math>n/(n+m)</math></b> ranges from <b>0.05 to 0.45</b>	

Invernizzi et al. disclose a supported Ziegler catalyst for olefin polymerization, obtained by reacting an organometallic compound of aluminum and an activated solid support in an inert solvent, followed by reacting with a titanium halide and a vanadium halide in the presence of an inert diluent, wherein the activated solid support is prepared

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by spray-drying of a solution of magnesium chloride in a mixture of ethanol and methanol in a weight ratio of ethanol to methanol from 0.5:1 to 2.5: 1 (claim 1). In other words, molar ratio of ethanol to methanol is (0.72-3.5) / 1. Thus, the minimum value of  $n + m = 1.72$ . Furthermore, attention is drawn to Table 1, wherein the results of  $n + m$  and  $n / (n + m)$  are summarized as follows when  $R = \text{Me}$ :

Example	%EtOH	%MeOH	m (EtOH)	n (MeOH)	$n+m$	$n / (n+m)$
1	14.2	7	0.31	0.22	0.53	0.42
4	14	2.3	0.30	0.07	0.37	0.19
9	7.5	15	0.16	0.47	0.63	0.75
10	7.5	15	0.16	0.47	0.63	0.75
14	8	6	0.17	0.19	0.36	0.53
15	7.5	15	0.16	0.47	0.63	0.75

Thus, Invernizzi et al. do not teach or fairly suggest an adduct comprising  $\text{MgCl}_2 \cdot (\text{EtOH})_m(\text{ROH})_n(\text{H}_2\text{O})_p$  having (A)  $(n+m) \geq 0.7$  and  $0.05 \leq n/(n+m) \leq 0.95$  and (B)  $n / (n+m) = 0.05 - 0.45$  when  $R$  is methyl and  $(n+m) = 0.7 - 1$ ,

Sacchetti et al. disclose a  $\text{MgCl}_2/\text{ROH}$  adduct, wherein  $R$  is an alkyl, cycloalkyl or alkylaryl radical with 1-12 carbon atoms and 0.2-2 moles of alcohol per mole of  $\text{MgCl}_2$  (claim 14). However, Invernizzi et al. do not teach or fairly suggest an adduct comprising  $\text{MgCl}_2 \cdot (\text{EtOH})_m(\text{ROH})_n(\text{H}_2\text{O})_p$  having (A)  $(n+m) \geq 0.7$  and  $0.05 \leq n/(n+m) \leq 0.95$  and (B)  $n / (n+m) = 0.05 - 0.45$  when  $R$  is methyl and  $(n+m) = 0.7 - 1$ ,

In light of the above discussion, it is evident as to why the present claims are patentable over the prior art.

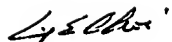
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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ling-Siu Choi whose telephone number is 571-272-1098.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on 571-272-1114.



LING-SUI CHOI  
PRIMARY EXAMINER

July 20, 2007